



# 1N5400 - 1N5408

# SILICON RECTIFIER

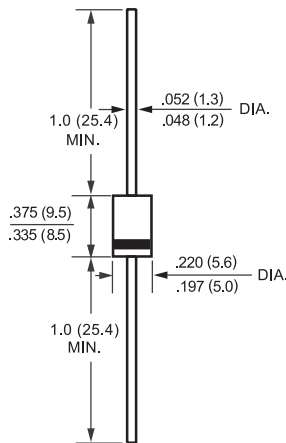
**VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 3.0 Amperes**

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.18 grams

## FEATURES

- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability



DO-27



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| PARAMETER  | SYMBOL                | 1N5400      | 1N5401 | 1N5402 | 1N5404 | 1N5406 | 1N5407 | 1N5408 | UNITS        |
|--|-----------------------|-------------|--------|--------|--------|--------|--------|--------|--------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$             | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts        |
| Maximum RMS Voltage  | $V_{RMS}$             | 35          | 70     | 140    | 280    | 420    | 560    | 700    | Volts        |
| Maximum DC Blocking Voltage  | $V_{DC}$              | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts        |
| Maximum Average Forward Rectified Current .375*(9.5mm) lead length at $T_L = 105^\circ C$            | $I_o$                 | 3.0         |        |        |        |        |        |        | Amps         |
| Peak Forward Surge Current 8.3 ms single half sine-wave Superimposed on rated load (JEDEC Method)    | $I_{FSM}$             | 200         |        |        |        |        |        |        | Amps         |
| Maximum Instantaneous Forward Voltage at 3.0A DC   | $V_F$                 | 1.1         |        |        |        |        |        |        | Volts        |
| Maximum DC Reverse Current at Rated DC Blocking Voltage  | @ $T_A = 25^\circ C$  | 5.0         |        |        |        |        |        |        | uAmps        |
|  | @ $T_A = 100^\circ C$ | 500         |        |        |        |        |        |        |              |
| Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at $T_L = 75^\circ C$ | $I_R$                 | 30          |        |        |        |        |        |        | uAmps        |
| Typical Junction Capacitance ( Note )  | $C_J$                 | 40          |        |        |        |        |        |        | pF           |
| Typical Thermal Resistance   | $R_{\theta JA}$       | 30          |        |        |        |        |        |        | $^\circ C/W$ |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$        | -65 to +175 |        |        |        |        |        |        | $^\circ C$   |

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts



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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

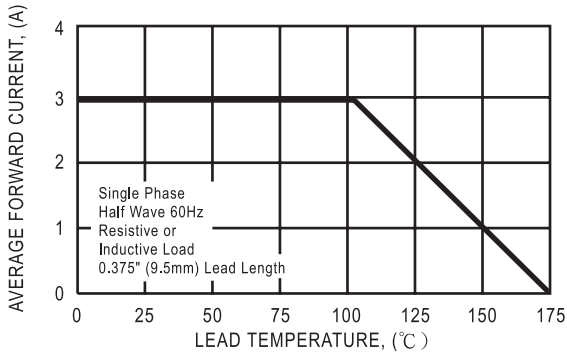


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

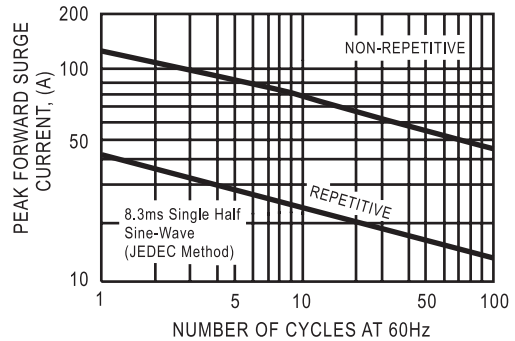


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD VOLTAGE, (V)

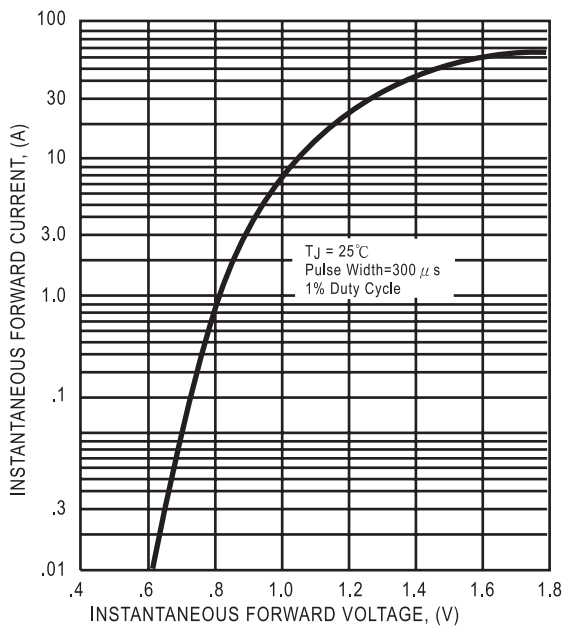


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

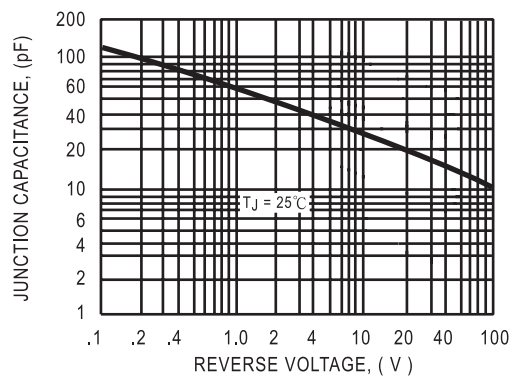


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

